



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

THE GESTATION PERIOD IN *THAMNOPHIS BUTLERII* (COPE).

In 1912 the writer (Biol. Bul., XXIV, pp. 18-20) published the results of observations on the breeding habits of *Thamnophis butlerii* (Cope), some of which concerned the length of the period of gestation in southern Michigan. Since the snakes have been observed to breed at various times between April 9 and April 24, and the time of breeding is probably determined largely by the prevailing temperatures during April, and because the young appear in August or early in September (August 7-September 6), it was concluded that "it is very probable that the length of the gestation period is rather exact for the species," the differences in the time of parturition being largely due to differences in the time of breeding. It is to be expected that the period is subject to some variation, since presumably the body temperature of the embryo, like that of the mother, fluctuates with the temperature of the air, and this influences the rate of development.

The records which have been obtained show that the length of the period may vary as much as 40 days. The female which was under observation in 1912, gave birth to young in 144 days, but a female which was fertilized on April 18, 1913, had her young on July 31, or in 104 days, and in the case of one which became pregnant on April 18, 1914, parturition occurred on August 9, or in 113 days.

The factors which cause this variation have not been determined, but that temperature is one is suggested by the fact that the snakes kept in relatively cool places during gestation, had the longest periods. The female which gave birth in 144 days was kept in a cool place in the laboratory and was not exposed to sunlight, while the female with the next shorter period was kept in a warm place and exposed to the sunlight for a short time each day, and the female which had young in 104 days was kept in a glass-covered cage in a warm room where the sunlight fell upon it for several hours each day. Unfortunately, the females which had copulated and were kept as controls, proved to be sterile, and the observations are

very few in number, so that no conclusions as to the cause of the variations in the gestation period have been reached. It is certain, however, that there are variations, and it is planned to investigate the influence of temperature by keeping the pregnant females in constant temperature rooms.

ALEXANDER G. RUTHVEN,
Ann Arbor, Mich.

LOS ANGELES SNAKES.

The following snakes were observed within one-half day's walk of the city of Los Angeles during the years 1913 and 1914:

- 1.—Rosy Boa, *Lachinura roseofusca*. (Cope)
- 2.—Pacific Bull Snake, *Pituophis catenifer*.
(Blainville)
- 3.—Boyle's King Snake, *Ophibolus getulus boylii*. (Baird & Girard)
- 4.—Coral King Snake, *Ophibolus zonatus*.
(Blainville)
- 5.—Red Racer, *Zamenis flagelliformis frenatus*.
(Stejneger)
- 6.—Blue Racer, *Zamenis constrictor flaviventris*.
(Say)
- 7.—Striped Racer, *Zamenis laterale*.
(Hallowell)
- 8.—Western Garter Snake, *Thamnophis parietalis*. (Say)
- 9.—Pacific Garter Snake, or "Water-snake,"
Thamnophis hammondi. (Kennicott)
- 10.—Patch-nosed Snake, *Salvadora grahamiae*.
(Baird & Girard)
- 11.—Western Ring-neck Snake, *Diadophis amabilis*. (Baird & Girard)
- 12.—*Rock Snake, *Hypsiglena ochroryncha*.
(Cope)
- 13.—*Tantilla, *Tantilla eiseni*. (Stejneger)
- 14.—Pacific Rattlesnake, *Crotalus oregonus*.
(Golbrook)

*Hitherto unrecorded from this locality.

PAUL RUTHLING,
Los Angeles, Cal.